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VZ DOWN UNDER CLUB

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Nose to the grindstone again. You surly are tyrants.

First a correction. I listed DISKMAG as Drysdale Av. It actually is Dugdale Av. but Jason advises that he prefers to use his P.O.Box 600. Taree. NSW. 2430.

I also missed out last issue, advising you that the longest running Newsletter, and one of the first, has ceased operation. This was John D'Alton and LE'VZ 200K300 OOPS. we all regret this closure, as we are getting thin on the ground.

Now some good news for HACKERS. DSE had a few VZ300s with various faults. Yes even VZeds have faults. I have bought the lot. So any hacker that wants a 300 to operate on, send me $20, and you have bought yourself a bargain(?). Even if you don't restore them, you will learn a lot and the keyboards are a direct replacement for the VZ200 keyboard. John told me recently, that he has only just switched from the 200to 300.

There are still some VZ articles available. Joysticks and both 200 and 300 expan. memories; disk drives at $99; controllers at $39.95; Wordproc cartridges; and printer interfaces. Some oddments of game tapes. The printer interface is a good buy at $9.95, for any hacker that has ideas of controlling from the VZ. You get the case with it's connector, a bit of cable and a centronics plug. That is about the limit of what is available. Anyone wanting the extended basic or dos eproms, get in touch with Joe Leon, at HVVZUG. Address under Other Clubs.

Anyone looking for a cheap printer, should consider the Brother M1109, now selling at $250. I used one for years, and had good service from it. It is still in use.

POSTAGE. We are glad to lend our library tapes out,and let you have access to the back issues, but you must send postage. Some do and some don't. In the future, if you don't receive an expected tape, consider if you have sent postage. It is becoming a big item, and is going to become bigger in a month or two.

In issue 23 I printed a method of rescuring a lost file. I used that to retrive a club list of over 190 members, with their records. I got 186 of them. This month, we publish a similar function for tape users, sent to us by Michael Maconald. Thanks Michael.

Also another program from Peter Ross. It is endlessly expandable,and very well thought out. Quite an accomplishment for his age. All the basework is there.

And for those that plug printer /joystick in/out and finish up with loose connections, there is a hardware article for you too.

Cheers, Harry

HOW TO RESCUE DOOMED PROGRAMS

By Michael MacDonald

Tape users were no doubt envious, when they read the article on using the DISK EDITOR to rescue a "lost" program from disk.

Now Michael has sent us a proceedure to rescue a program from TAPE.

Good Fishing! (ed)

Ever had one of those days where nothing seems to work and the program you saved only yesterday seems to have fallen into the black hole for lost programs? And after spending the rest of the day being totally infuriated by not being able to reload your program.
Every time you try you are plagued with the same old result,

"LOADING ERROR"

By now you're so angry you give up and start to type it all in again! But STOP! There's no need to do that.
You can rescue that doomed listing. HERE'S HOW!

(i) First, load up the program (don't worry about the loading error) just ignore it.

(ii) Now, list the program. If the program lists fully (or nearly) without throwing a mental attach all is not lost. This may have happened before. It is quite amazing how a program loads in, lists but when run throws a tantrum, flashed crazily or just locks up.

(iii) Now type in this command

```
PRINT PEEK(30884);PEEK(30885)
```

This will print out the LSB (least significant Byte) and MSB (most significant Byte) values present in the Start of Basic program pointers. The values will give you the address at which your program starts; e.g the computer printed out 233 122. This means 122*256+233-31465 is the start of your program.

(iv) Now if you type in

```
PRINT PEEK(30969);PEEK(30970)
```

This will print out the values present in the END of BASIC Program Pointers and will tell you the address of the end of the program using the same technique above to find the address.

(v) But, you'll notice that this value is not very much greater than the Start of Basic pointer. What has happened is that the computer has read most of the data of the program but something has stopped the computer reading the last pieces of information which containd the values for the end of the program address.

It may now seem easy to fix the problem, just replace the

missing values into the pointers. But it's not. First you have to find the values of where your program ends. This is quite a laborious task.

Type in

FOR I=(start of basic) TO (approx. guess):PRINT CHR$(PEEK(I));:NEXT

When you execute this the screen will be filled with lots of strange characters and mumbo jumbo but occasionally ypu'll see and recognise a string of text out of your program. When the search passes the program you'll know because there'll be less junk on the screen or it will have passed text near the end of the program. As soon as this happens, BREAK the execution and find the value of <<I>>.

PRINT I

This will show the address where your program roughly ends.

(vi) Now you must find the LSB and MSB values.

First type in

PRINT INT(I/256)

This gives you the MSB.

PRINT I - (MSB*256)

And this gives you the LSB.

(vii) Now POKE the values into memory.

POKE 30969,LSB: POKE 30970,MSB

Hey Presto! your program may be rescued!!

Caution :- If your program contains various machine code routines it may not work or even if it does'nt your program still may not do so cross your fingers and hope it does.

The next step BEFORE running it is to list it and fix up any errors found in the listing that may have crept in. Then quickly save it. Now type RUN and your worries may be over.

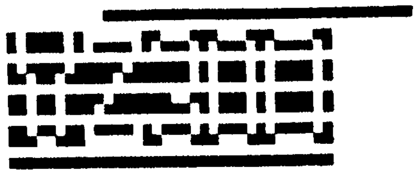
Alternatively if a program is saved over a chewed section of tape the portion before the chewed bit can be rescued by BREAKing before the LOADING ERROR and doing the same process as above.

I hope this article has brought you back from the depths of despair and has got you programming again.

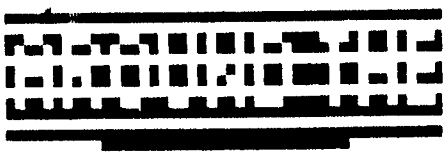
AROUND THE WORLD

BY PETER ROSS

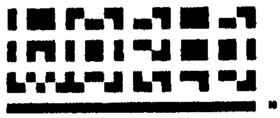
```
5 GOTO 3160
10 COLOR4,0:CLS:PRINT:PRINT"      PETER  RO
SS  AND  THE"
20 PRINT:PRINT"
30 PRINT"
40 PRINT"
50 PRINT"
60 PRINT"
70 PRINT"
```



```
80 PRINT:PRINT"    PERSONAL COLOUR COMPUTE
R
90 PRINT:PRINT"              PRESENTS
95 FORX=1TO3000:NEXT:GOTO130
130 CLS:PRINT
140 COLOR3:PRINT:PRINT:PRINT
150 PRINT"
160 PRINT"
170 PRINT"
180 PRINT"
190 PRINT"
"
```



```
200 PRINT"
210 PRINT"
220 PRINT"
230 PRINT"
```



```
235 FORZ=1TO3000:NEXT:GOTO550
270 COLOR3:MODE(1):A=-1
271 COLOR2:SET(56,15):SET(57,15):SET(58,15
):SET(59,15)
272 COLOR2:SET(60,15):SET(61,15):SET(62,15
):SET(63,15)
273 COLOR2:SET(64,15):SET(65,15):SET(66,15
):SET(67,15)
274 SET(68,15):SET(69,15):SET(70,15):SET(7
1,15):COLOR3
280 A=A+1:SET(A,63):IFA=127THENGOTO300
290 GOTO 280
300 A=0:B=43:C=1:D=42
310 A=A+2:B=B-1:C=C+2:D=D-1:SET(C,D):SET(A
,B):IFA=54THENGOTO 330
320 GOTO310
330 A=127:B=43:C=126:D=42
340 A=A-2:B=B-1:C=C-2:D=D-1:SET(C,D):SET(A
,B):IFA=73THENGOTO360
350 GOTO 340
360 COLOR2:A=16:B=15:C=0
370 C=C+1:A=A+3:B=B+3:SET(A,34):SET(B,36):
IFC=32THENGOTO 390
380 RESET(112,34):GOTO 370
390 COLOR4:A=128:B=127
400 B=B-1:SET(B,63):SET(B-1,63):SET(B-2,63
):SET(B-3,62)
410 SET(B-4,61):SET(B-4,60):SET(B-4,59):SE
420 SET(B-4,56):SET(B-3,55):SET(B-2,54):SE
T(B-1,53):SET(B-1,52)
430 SET(B-1,51):SET(B-1,50):SET(B,49):RESE
T(B-2,62)
440 RESET(B-3,62):RESET(B-3,61):RESET(B-3,
60):RESET(B-3,59)
450 RESET(B-3,58):RESET(B-3,57):RESET(B-2,
56):RESET(B-1,55)
460 RESET(B,53):RESET(B,52):RESET(B,51):RE
SET(B,50):SET(B,63)
470 SET(B-2,62):SET(B-2,63):RESET(B-1,54):
IFB=4THENGOTO 531
490 GOTO 400
500 'COLOR2:SET(56,15):SET(57,15):SET(58,1
5):SET(59,15)
510 'COLOR2:SET(60,15):SET(61,15):SET(62,1
5):SET(63,15)
520 'COLOR2:SET(64,15):SET(65,15):SET(66,1
5):SET(67,15)
530 'SET(68,15):SET(69,15):SET(70,15):SET(
71,15)
531 IFUR=5THENSOUND31,1:COPY
532 FORI=1TO1000:NEXT
540 GOSUB 550
545 GOSUB 850
550 COLOR3:MODE(1):SET(20,20):SET(21,20):S
ET(22,20):SET(23,20)
560 SET(24,20):SET(25,21):SET(25,22):SET(2
6,23):SET(26,24)
570 SET(27,25):SET(27,26):SET(19,21):SET(1
9,22):SET(19,23)
580 SET(19,24):SET(19,25):SET(19,26):SET(1
9,27):SET(19,28)
590 SET(19,29):SET(20,30):SET(21,31):SET(2
2,32):SET(23,32):
600 SET(24,32):SET(25,32):SET(26,32):SET(2
7,32):SET(28,27)
610 SET(28,32):SET(29,27):SET(29,32):SET(3
0,27):SET(30,32)
620 SET(31,27):SET(31,32):SET(32,27):SET(3
2,32):SET(33,27)
630 SET(33,32):SET(34,27):SET(34,32):SET(3
5,27):SET(35,32)
640 SET(36,27):SET(36,32):SET(37,32):SET(3
7,27):SET(38,32)
650 SET(38,27):SET(39,27):SET(39,32):SET(4
0,32):SET(40,27)
660 SET(41,27):SET(41,32):SET(41,33):SET(4
0,33):SET(39,34)
670 SET(38,35):SET(37,36):SET(36,37):SET(3
5,38):SET(34,39)
680 SET(33,40):SET(32,41):SET(31,42):SET(3
```

```
690 SET(34,42):SET(35,42):SET(36,42):SET(3
7,42):SET(38,42)
700 SET(39,41):SET(40,40):SET(41,39):SET(4
2,38):SET(43,37)
710 SET(44,36):SET(45,35):SET(46,34):SET(4
7,33):SET(48,32)
720 SET(48,33):SET(49,32):SET(50,32):SET(5
1,32):SET(52,32)
730 SET(53,32):SET(54,32):SET(55,31):SET(5
6,31):SET(57,30)
740 SET(57,29):SET(56,28):SET(55,27):SET(5
4,27):SET(53,27)
750 SET(52,27):SET(51,27):SET(50,27):SET(4
9,27):SET(48,27)
760 SET(47,27):SET(46,27):SET(45,27):SET(4
4,27):SET(43,27)
770 SET(42,27):SET(45,26):SET(46,25):SET(4
7,24):SET(48,23)
780 SET(49,22):SET(50,21):SET(51,20):SET(5
2,19):SET(51,18)
790 SET(53,18):SET(54,18):SET(55,18):SET(5
6,18):SET(57,18)
800 SET(52,18):SET(58,19):SET(57,20):SET(5
6,21):SET(55,22)
810 SET(54,23):SET(53,24):SET(52,25):SET(5
1,26):SET(50,27)
820 SET(28,29):SET(32,29):SET(36,29):SET(4
0,29):SET(44,29)
830 SET(48,29):SET(52,29):SET(54,29):
831 A$=INKEY$:A$=INKEY$
832 IFA$="A"THENGOTO2910
833 IFA$="V"THENGOTO850
834 IFA$="I"THENGOTO1470
840 IFA$="B"THENGOTO1700
841 IFA$="C"THENGOTO2140
842 IFA$="P"THENGOTO1300
843 IFA$="G"THENGOTO1110
844 IFA$="T"THENGOTO2600
847 IFA$="F"THENGOTO270
848 GOTO831
850 MODE(1)
860 A=0
870 A=A+1:SET(A,63):IFA=127THENGOTO890
880 GOTO870
890 A=63
900 A=A-1:SET(20,A):SET(100,A):IFA=30THENG
OTO 920
910 GOTO900
920 A=20:B=30:C=100:D=30
930 A=A+2:B=B-1:C=C-2:SET(A,B):SET(C,B):IF
A=60THENGOTO 950
940 GOTO 930
950 A=10
960 A=A-1:SET(59,A):SET(60,A):SET(61,A):IF
A=0THENGOTO0980
970 GOTO0960
980 A=54
990 A=A+1:SET(A,4):SET(A,5):IFA=65THENGOTO
 1010
1000 GOTO990
1010 SET(61,10):SET(59,10):A=38:B=50:
1020 A=64
1030 A=A-1:SET(50,A):SET(70,A):IFA=45THENG
OTO 1050
1040 GOTO1030
1050 SET(51,44):SET(69,44):SET(52,43):SET(
68,43):SET(53,42)
1060 SET(67,42):SET(54,41):SET(66,41):SET(
55,40):
1070 SET(56,40):SET(57,40):SET(58,40):SET(
59,40):SET(60,40)
1080 SET(61,40):SET(62,40):SET(63,40):SET(
64,40):SET(65,40)
1081 IFUR=5THENSOUND31,1:COPY
1090 FORI=1TO4000:NEXT
1100 GOSUB550
1110 COLOR4:MODE(1):A=-1
1120 A=A+1:SET(45,A):SET(46,A):SET(65,A):S
ET(66,A)
1130 IFA=49THENGOTO1150
1140 GOTO1120
1150 A=46
1170 A=A+1:SET(A,2):SET(A,3):SET(A,13):SET
(A,12)
1180 SET(A,24):SET(A,23):SET(A,39):SET(A,4
0):IFA=65THENGOTO1200
1190 GOTO 1170
1200 A=0:B=63:C=0
1210 C=C+1:A=A+3:B=B-1:SET(A+1,B):SET(A,B)
:IFC=18THENGOTO1220
1215 GOTO 1210
1220 A=109:B=63:C=0
1230 C=C+1:A=A-3:B=B-1:SET(A,B):SET(A-1,B)
:IFC=18THENGOTO1250
1240 GOTO1230
1250 COLOR2:A=45:B=45:C=0
1260 A=A+1:B=B+1:SET(54,A):SET(55,B):IFA=6
3THENGOTO 1280
1270 GOTO 1260
1280 IFUR=5THENSOUND31,1:COPY
1281 FORI=1TO4000:NEXTI
1290 GOSUB 550
1300 MODE(1):COLOR2:A=0
1310 A=A+1:SET(A,63):IFA=127THENGOTO 1330
1320 GOTO 1310
1330 A=-0:B=64
1340 A=A+1:B=B-1:SET(A,B):IFA=63THENGOTO 1
360
1350 GOTO 1340
1360 A=128:B=64
1370 A=A-1:B=B-1:SET(A,B):IFA=64THENGOTO13
90
1380 GOTO 1370
1390 A=63
1400 A=A-1:SET(57,A):SET(70,A):IFA=50THENG
OTO1420
1410 GOTO 1400
1420 A=56
```

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1430 A=A+1:SET(A,50):IFA=70THENGOTO 1450
1440 GOTO 1430
1450 IFUR=5THENSOUND31,1:COPY
1451 FORI=1TO4000:NEXT
1460 GOSUB550
1470 COLOR4:MODE(1):A=0
1480 A=A+1:SET(A,63):IFA=127THENGOTO1500
1490 GOTO1480
1500 A=40:B=87:C=63:D=0
1510 A=A+1:B=B-1:C=C-1:D=D+1:SET(A,C):SET(
B,C):IFA=60THEN1550
1520 GOTO 1510
1550 B=43
1560 B=B-1:SET(60,B):SET(67,B):IFB=4THENGO
TO1580
1570 GOTO 1560
1580 SET(61,3):SET(66,3):SET(62,2):SET(65,
2):SET(63,1):SET(64,1)
1590 SET(63,0):SET(64,0)
1600 A=47
1610 A=A+1:SET(A,46):IFA=78THENGOTO 1630
1620  GOTO 1610
1630 A=50:B=77:C=63:D=0
1640 A=A+1:B=B-1:C=C-1:D=D+1:SET(A,C):SET(
B,C):IFD=10THEN1660
1650 GOTO 1640
1660 SET(60,53):SET(61,53):SET(62,53):SET(
63,53):SET(64,53)
1670 SET(65,53):SET(66,53)
1680 IFUR=5THENSOUND31,1:COPY
1681 FORI=1TO4000:NEXT
1690 GOSUB 550
1700 COLOR3:MODE(1):A=0
1710 A=A+1:SET(A,63):SET(A,40):IFA=127THEN
GOTO1730
1720 GOTO 1710
1730 A=64
1740 A=A-1:SET(0,A):SET(127,A):IFA=40THENG
OTO 1760
1750 GOTO1740
1760 A=53
1770 A=A+1:RESET(A,40):IFA=72THENGOTO1790
1780 GOTO 1770
1790 A=40:
1800 A=A-1:SET(53,A):SET(73,A):IFA=25THEN1
820
1810 GOTO 1800
1820 A=53
1830 A=A+1:SET(A,25):IFA=73THENGOTO1850
1840 GOTO 1830
1850 A=63
1860 A=A-1:SET(11,A):SET(21,A):SET(31,A):S
ET(41,A):SET(51,A)
1870 SET(117,A):SET(107,A):SET(97,A):SET(8
7,A):SET(77,A)
1880 IFA=40THENGOTO 1900
1890 GOTO 1860
1900 A=0:B=127
1910 A=A+1:B=B-1:SET(A,51):SET(B,51):IFA=5
1920 RESET(76,51):GOTO1910
1930 RESET(76,51)
1940 C=63:COLOR2
1950 C=C-1:SET(54,C):SET(73,C):IFC=49THENG
OTO 1970
1960 GOTO 1950
1970 A=54
1980 A=A+1:SET(A,49):IFA=73THENGOTO2000
1990 GOTO1980
2000 A=63
2010 A=A-1:SET(63,A):SET(64,A):IFA=49THENG
OTO2030
2020 GOTO2010
2030 A=25
2040 A=A-1:SET(57,A):SET(58,A):IFA=10THENG
OTO 2060
2050 GOTO 2040
2060 COLOR4:SET(59,11):SET(60,11):SET(61,1
1):SET(62,11)
2070 SET(63,11):SET(64,11):SET(65,11):SET(
66,11):SET(67,11)
2090 SET(67,12):SET(67,13):SET(67,14):SET(
67,15):SET(67,16)
2100 SET(59,17):SET(60,17):SET(61,17):SET(
62,17):SET(63,17)
2110 SET(64,17):SET(65,17):SET(66,17):SET(
67,17)
2111 IFUR=5THENSOUND31,1:COPY
2120 FORI=1TO4000:NEXT
2130 GOSUB 550
2140 MODE(1):COLOR4:A=0
2150 A=A+1:SET(A,63):IFA=127THENGOTO 2170
2160 GOTO 2150
2170 A=63
2180 A=A-1:SET(20,A):SET(100,A):IFA=30THEN
GOTO 2200
2190 GOTO 2180
2200 A=20:B=30:C=100:D=30
2210 A=A+2:B=B-1:C=C-2:SET(A,B):SET(C,B):I
FA=60THENGOTO2230
2220 GOTO2210
2230 A=10
2240 A=A-1:SET(59,A):SET(60,A):SET(61,A):I
FA=0THENGOTO2260
2260 SET(101,30):SET(19,30):SET(18,29):SET
(102,29)
2390 SET(103,29):SET(17,29):SET(102,28):SE
T(18,28)
2400 SET(18,27):SET(102,27):SET(18,26):SET
(102,26)
2410 SET(17,26):SET(103,26):SET(104,27):SE
T(16,27)
2420 A=20
2430 A=A+1:SET(A,30):SET(A,38):IFA=100THEN
GOTO2450
2440 GOTO2430
2450 SET(30,32):SET(31,32):SET(32,32):SET(
33,32):SET(31,33)
2460 SET(33,33):SET(34,33):SET(31,34):SET(
```

```
2470 SET(31,35):SET(33,35):SET(31,36):SET(
30,36)
2480 SET(60,32):SET(61,33):SET(61,34):SET(
60,34):SET(62,35)
2490 SET(60,35):SET(59,36):SET(61,36)
2500 SET(85,32):SET(84,33):SET(85,33):SET(
84,34):SET(85,34)
2510 SET(86,34):SET(85,35):SET(84,36):A=63
2520 A=A-1:SET(56,A):SET(70,A):IFA=45THENG
OTO 2540
2530 GOTO 2520
2540 A=55
2550 A=A+1:SET(A,45):IFA=70THENGOTO2570
2560 GOTO 2550
2570 IFUR=5THENSOUND31,1:COPY
2580 FORI=1TO4000:NEXT
2590 GOSUB550
2600 COLOR4:MODE(1):A=0
2610 A=A+1:SET(A,63):IFA=127THENGOTO 2630
2620 GOTO 2610
2630 A=63
2640 A=A-1:SET(56,A):SET(70,A):IFA=0THEN 2
660
2650 GOTO 2640
2660 A=56
2670 A=A+1:SET(A,0):IFA=70THENB=0:GOTO 269
0
2680 GOTO 2670
2690 A=RND(63)
2700 RESET(56,A):SET(57,A):B=B+1:IFB=10THE
NB=0:GOTO2720
2710 GOTO2690
2720 A=RND(63)
2730 RESET(70,A):SET(69,A):B=B+1:IFB=10THE
NGOTO2750
2740 GOTO2720
2750 SET(60,2):SET(61,2):SET(62,2):SET(63,
2):SET(64,2)
2760 SET(65,2):SET(66,2):SET(67,3):SET(59,
3):SET(59,4):SET(64,9)
2770 SET(67,4):SET(59,5):SET(67,5):SET(59,
6):SET(67,6):SET(66,9)
2780 SET(61,4):SET(65,4):SET(59,7):SET(67,
7):SET(59,8):SET(67,8)
2790 SET(60,9):SET(61,9):SET(62,9):SET(63,
9):SET(64,9):SET(65,9)
2800 SET(63,10):SET(63,11):SET(62,10):SET(
64,10):SET(62,11)
2810 SET(64,11):SET(61,13):SET(61,14):SET(
65,14):SET(65,15)
2820 SET(62,20):SET(62,21):SET(66,22):SET(
66,23)
2830 SET(62,33):SET(62,34):SET(65,34):SET(
65,35):C=0
2840 A=RND(63):B=RND(68)
2850 IFA<12THENGOTO2840
2860 IFB<58THENGOTO2840
2870 SET(B,A)
2880 C=C+1:IFC=20THENGOTO2900
2890 GOTO 2840
2900 IFUR=5THENSOUND31,1:COPY
2901 FORI=1TO3000:NEXT
2905 GOSUB550
2910 MODE(1):A=22:COLOR4
2920 A=A+2:SET(A,10):IFA=104THENGOTO 2940
2930 GOTO2920
2940 A=0:B=25:C=0
2950 A=A+1:B=B-1:SET(A,B):IFA=10THENGOTO29
70
2960 GOTO 2950
2970 A=A+3:B=B-1:C=C+1:SET(A,B):IFC=4THENG
OTO 2990
2980 GOTO 2970
2990 A=127:B=25:C=0
3000 A=A-1:B=B-1:C=C+1:SET(A,B):IFC=10THEN
C=0:GOTO3020
3010 GOTO 3000
3020 A=A-3:B=B-1:C=C+1:SET(A,B):IFC=4THENG
OTO 3040
3030 GOTO 3020
3040 A=0
3050 A=A+1:SET(A,25):IFA=127THENGOTO 3070
3060 GOTO 3050
3070 COLOR4:
3080 A=0:B=58:C=0
3090 C=C+1:A=A+2:B=B-1:SET(A+1,B):SET(A,B)
:IFC=33THENGOTO3110
3105 GOTO 3090
3110 A=127:B=58:C=0
3120 C=C+1:A=A-2:B=B-1:SET(A,B):SET(A-1,B)
:IFC=33THENGOTO3140
3130 GOTO3120
3140 IFUR=5THENSOUND31,1:COPY
3141 FORI=1TO4000:NEXT
3150 GOSUB 550
3160 CLS:MODE(0):PRINT@0,"INSTRUCTIONS?
"

3170 A$=INKEY$:A$=INKEY$
3180 IFA$="N"THENGOTO3390
3190 IFA$="Y"THENGOTO3210
3200 GOTO 3170
3210 CLS:PRINT"    --*:AROUND THE WORLD:*-
-

3220 PRINT"AROUND THE WORLD IS A GRAPHICIA
L";
3230 PRINT"TYPE OF GAME WHICH CAN BE USED"
3240 PRINT"WITH A PRINTER.WHEN YOU SEE THE
"

3250 PRINT"JET ON YOUR SCREEN YOU CAN PRES
S";
3260 PRINT"     [T]-NEW ZEALAND"
3270 PRINT"     [G]-NEW YORK"
3280 PRINT"     [P]-EGYPT"
3290 PRINT"     [C]-CHINA"
3300 PRINT"     [B]-LONDON"
3310 PRINT"     [I]-FRANCE"
3320 PRINT"     [V]-ITALY"
3330 PRINT"     [A]-AUSTRALIA
```

AROUND THE WORLD ---CONT

```
3340 PRINT"      [F]-JAPAN"
3350 PRINT"        PRESS [C] TO CONTINUE"
3360 A$=INKEY$:A$=INKEY$
3370 IFA$="C"THEN3390
3380 GOTO 3360
3390 CLS:MODE(0):PRINT"PRINTER(Y/N)":FORX=1TO200:NEXT
3400 A$=INKEY$:A$=INKEY$
3410 IFA$="Y"THENGOTO 3440
3420 IFA$="N"THENUR=101:GOTO10
3430 GOTO 3400
3440 CLS:PRINT:PRINT"              PRINTER
3450 PRINT:PRINT"TURN YOUR PRINTER ON NOW. THE
3460 PRINT"PLACES WILL BE PRINTED OUT ON IT";:PRINT
3465 PRINT"MOST PRINTERS WILL NEED A PRINTER PATCH":PRINT
3470 PRINT:PRINT:PRINT:PRINT"    PRESS [S] TO START GAME
3480 A$=INKEY$:A$=INKEY$
3490 IFA$="S"THENUR=5:GOTO10
3500 GOTO 3480
```

THINGS THE V.Z.GETS BLAMED FOR!

A small extract from a letter:-

Hhope it does'nt----

Does that at times. Stutter after a capital. Has happened on all the V.Zs I have had.

Ed comment:- Only thing has'nt changed is the operator.

Do it in slow motion. Press shift+H. Now let the shift up befor the H. That made it stutter!. Only a case of not letting the right hand know what the left is doing. I do it a lot.

WHY MAKE LIFE DIFFICULT?

You want to plug in an attachment to the VZ. Carefully going by the book, you switch the VZ off, then as an extra precaution you also switch off the power point.

You insert the attachment and switch on the VZ. The red light flashed on for a momentand then goes out! The VZ is as dead as a maggot. You switch it off, take out the attachment and try again. Still dead! PANIC!! After checking the attachment and pulling the VZ to pieces, you discover that you forgot to switch on the power point, and the flash of the red light was caused by the charge held in the plugpack. Back to square one.

Also heard of a member who tapped his T.V. to get a monitor input, and then found the attachment he was going to use did'nt have a Monitor output!!!!

GAMES COLUMN

There is an apology to be made here. To all those who have sent in about the Public Domain Tape, I am sorry about the incredible delay but do not give up hope. You should receive the tape about the same time you are reading this, if not before.

Thanks again to Harry for filling the space I left last issue. His advice is being taken here and I advise anyone else with similar expansion connection problems to do the same.

As usual, the VZ Games subject has been pretty quiet as of late. Interesting to note is David Wood's game-writing series which should be elsewhere in this issue.

Take note of this!

Games should be a way of relieving stress and having fun! Who knows your taste in games better than yourself? So write a game today, simple or brain-wracking, (it doesn't matter) and send it in to VZ Public Domain Tape to make your mark in computer games. There will always be someone else who will appreciate it. Write in NOW! (please!)

The game to be playing this issue is .....
THE MAZE OF DEAD

"A strange force surrounds you and you fall to THE MAZE OF THE DEAD." Isn't it always the way! If you haven't heard of this one before it's hardly surprising because this one's NEW. Yes finally a new adventure game programmed by regular contributer to this column, Michael McDonald. As the name suggests, your playing area is a maze of very unfriendly dead people. In case you haven't noticed, dead people in computer games usually aren't friendly for some reason. Anyway, being a maze game, your object is to find your way out. Simple? Think again.

Some of the features of this interesting program include the idea of limited moves and having your inventory list constantly updated for you on the screen. The games vocabulary is fairly standard (ie. get, drop, use, etc.) so it is easy for anyone, beginners or 'experts', to play. It's good to see another person along with David Wood taking VZ games further than the old Dick Smith selection.

This great piece of software will become available very soon on the VZ Public Domain Tape. Watch out for it!

RATING:
*Vocabulary: 5
*Puzzle Difficulty: 6
*Atmosphere: 8
*Lastability: 7
OVERALL...................6 and a half.

HOT, HANDY & HELPFUL HINTS

In order to attract more interest, I'd like to invite everyone to send in hints not only for adventures but for any other games as well. eg.

action games.

THE CURSE OF MERKFRUIT LODGE:* That piece of paper is wrinkled! Better iron it out. Now where's that power point!
* Why do the thin walls always get axed?!?

KNIGHT'S QUEST:(Anyone else finished this one yet?)
* You know how eating your vegetables make you big and strong? Well mushrooms don't abide by this rule.

QUESTIONS & QUERIES

PHAROAH'S TOMB:? David Wood needs to know what verb you use to place the jewels in the slot. He has already tried put, place, drop and insert but none seem to work. Can you help?
Try PUSH or SHOVE (ed.)

HIGH SCORES!

Yes, a change!

TEN PIN BOWLING 185 DAVID WOOD

Bernice O'Mahoney's long standing record gets bowled over. Will she take revenge?

That's about it. Again, I am very sorry about the PD Tape delay. I hope the high quality of software makes up for the wait.

Please send all your hints, questions and answers in to:

Paul Frantz
25 Crocker St
KIRWAN QLD 4817

See you next Edition!

The HIGH Scores

DAWN PATROL	52500	David Wood
CRASH	410	Harry Huggins
DIG OUT	24400	Paul Frantz
HAMBURGER SAM	39500	Stephen Frantz
LADDER CHALLENGE	22130	Paul Frantz
KAMIKAZE	6710	Stephen Frantz
TEN PIN BOWLS	185	David Wood
VZ INVADERS	13990	Mitch Pendlebury
GALAXON	150000	Nicole Huggins
PENGUIN	1350	Jason Oakley
LUNAR LANDER	3600	Jason Oakley
SUPER SNAKE	811	Tim Oliver

***** DATABASES *****

Which is the best??

######################## L

There are anynumber around. They all have their good points, and shortcomings!

The best is the one that will do your work, and is understood by you. Better still if you can alter it to be dedicated to the job in hand.

Here is that program!

Except for the sorting routine, which is M/C, (because basic is just too slow), it is all in Basic, and can be altered to your needs. Any part may be left out, so you build it to suit yourself.

This is the first of a 2 part series of databases. This part will read the disk DIR to datafile, where it can be edited, sorted, saved and printed out.

Part 2 will be a database with keyboard input, giving virtually unlimited fields, with all the above facilities.

The skeleton of both are the same, so those only wanting the second part, can type in now the lines from start to end of 300, and the VIEW routine.(700-785)

```
10 REM ### VZDUDATA ### 30-6-90. by H.M.HUGGINS
15 CLS:PRINT:PRINT:PRINT:LIST20-25
20 LOAD"XB":ONLY"DE","DI"          THEN RUN 30
25 REM IF PROGRAM BROKEN THEN TYPE <<GOTO 200>>. DON'T RUN.
```

We use Extended Basic to take advantage of some of the facilities made available by Russell Harrison's XB. However the original XB by Gerhart Woulf will also work. The advantage with the first is that a section can be loaded. This saves about 3K bytes.

```
30 CLS:GOTO120:REM VZDUDATA
```

Between here and line 120 is only saving and loading routines, that have nothing to do with the program, until there is something in the file to need them.

```
110 CLOSEG$:RETURN
```

This is where we initialize the program. The CLEAR and DIM settings have to be adjusted to suit your computer memory.

Put in nominal entries as shown. RUN and press << X >>. Two numbers will show. The left is free memory. The right is space reserved for strings by the CLEAR statement. The length of your strings will be about 25. Divide your free memory by 25. Dim for 100 less than that and CLEAR for DIM by 25. Now RUN and press X again. If you get OUT OF MEMORY reduce the CLEAR and try. You have to balance the 2 of them and have ABOUT 1000 in the left figure. For a VZ300 with 16K EXP. you can use 750 and 18500.

```
115 REM ######### SET-UP #####
115 REM ######### SET-UP ##########
120 CLS:CLEAR1000:COLOR6,0 125 DIMP$(100)
130 T=0:F=0:C=0:Y=1:A=1:Z=1:DRIVE1
135 G$="NO NAME"

190 REM############MENU############
200 POKE30777,1:CLS:GOSUB110:PRINT@75,"MENU"
205 PRINT:PRINT
210 PRINT"     T= ";T;"          DRIVE-";A
215 PRINT" V-IEW";TAB(15)"W-RITE"
220 PRINT" F-DELETE INDEX";TAB(15)"X-MEMORY"
225 PRINT" L-OAD";TAB(15)"S-AVE"
230 PRINT" O-VER-RIDE T";TAB(15)"R-READ DIR"
235 PRINT" D-STATUS-DIR";TAB(15)"A-ALPH SORT"
240 PRINT" P-LPRINT";TAB(15)"T-SET DRIVE
245 PRINT" E-DIT"
```

The only things to clarify in the Menu is the GOSUB 110 and the O-VERRIDE T.

T is the Top of the File. Sorting is from 0 TO T. If you don't want to sort the whole file, you alter T to what you want. You may also ADD or Delete i;tems with EDIT. This will not increase<< T >>so you have to use O to alter it. Also when you have combined several files, and then loaded them the<< T >>has to be set to how many you loaded.

GOSUB 110 automatically closes a file you may have forgotten. Such as if you only want a sample of a file. You start loading, and when you have a sample you use BREAK to stop it. This leaves the file open. You would type GOTO 200---NOT RUN---, and the GOSUB closes the file for you. Very important, else you may type on for an hour, attempt to SAVE and be greeted with DISK BUFFER FULL. If you can remember the last file you had open, it's only a matter of typing <<Close XXXX:RETURN >>, but which file!

```
250 POKE30777,35
255 Q$=INKEY$:Q$=INKEY$:IFQ$=""THEN255
260 IFQ$="A"THENGOSUB1100:'SORT
265 IFQ$="D"THEN355:'DIR
270 IFQ$="E"THENGOSUB1000:GOTO200:'EDIT
275 IFQ$="F"THEN1300:'DELETE INDICIES
280 IFQ$="L"THEN85:'LOAD DISK
285 IFQ$="X"THEN650:'MEM
290 IFQ$="O"THEN350'SET T
295 IFQ$="P"THEN600:'LPRINT
300 IFQ$="R"THEN400'READ DIR
305 IFQ$="S"THEN50'SAVE DISK
310 IFQ$="T"THEN335 'SET DRIVE
315 IFQ$="V"THEN700ELSE255 :'VIEW
317 IFQ$="M"THEN200:'MENU
320 IFQ$="W"THEN900ELSE255:GOTO255:'WRITE
```

```
330 REM ###### UTILITIES #########
  335 CLS:INPUT"DRIVE 1 OR 2";A:IFA=1THEN340ELSE345
  340 DRIVE1:GOTO200
  345 DRIVE2:GOTO200
  350 CLS:INPUT"T=??";T:GOTO200
  355 CLS:STATUS:
  360 PRINT:PRINT"HIT <D> OR <M> OR <S> OR <L>": GOTO 255
```

That, plus the VIEW in lines 700 plus is the skeleton of both parts.

Now we will go onto the specialized routines.

This section is the heart of this part. It will read the DIR of the disk, and put them in DATA in the file.

It uses the FILE$ command of the extended basic commands. First it displays the DIR on the screen, and asks if you want that disk in the file. If you decide YES then you type in the disk number, using 3 digets at least. Such as 001 025 100 200. You may add to that if you want to, as 005-a; 005-a-music etc. and you may copy the STATUS, which is displayed. It then goes on to list the dir as it is dataized, together with the type and length of file. All this is taken into one data line << P$(x) >>.

If you choose not to have that disk in the file, you answer N and hit RETURN. You are then asked for the next disk.

If you answer N and N you will be back in the MENU. Press V and it goes to the View routine and you are asked for start. If you press RETURN you will start from line 0. There will be nothing in line 0, but when you press SPACE it will scroll through the file. You will see it lists out :-

1 123 EXT BAS B 123-b 12567.

1 is the file number. 123 is the echo of the first 3 figures you put in when reading the DIR. They are used to put the disks in numerical order, regardless of the arder you put them in.

Then there is the filename and the type. T B W D F S O or whatever. D files (DATA) will not have a length shown).

Then there is the disk number 123-A. Then the length of the file.

At the first viewing, the disks will be in the orderin which you presented them.

From the MENU press A-LPHABETISING. Then VIEW again. Now you will find the disks in numerical order, and moreover the contents of each disk in ALPH. order. At this stage I suggest you SAVE the file.

Now from menu choose F-DELETE. You will be asked left or right. Choose L. Answer the start and end, and answer 3 and press RETURN. You will be back in MENU. View again and you will find those 3 figures before the file name are gone. Go to MENU and press A-LPH. This time you when you VIEW you will find the whole file in ALPH. order.

If you do not want the length in the file, use F-DELETE again. This time choose R answer start and end and answer 5. Press RETURN and when you VIEW you will see the right hand figers are deleted.

At any stage you may save or printout.

The left hand figures are also used for delete and insert of files. To delete go to EDIT and simply delete all the item. Name,type and all the figures. Or replace the left figures with 999. Then SORT again.

To insert, pick a number after the end of the file.<<T+1>> Go to EDIT and start at that number. Now type in the number of the first 3 figures of the disk number you wish it to be in, together with all the other information. Filename type disk no. and length if wanted. Go back to MENU,use the O command and correct T to the new TOP OF FILR. You mayinsert as many as you like one after the other. When you sort it will take it's place as indicated by the left 3 figures.

All this ofcourse is done before you delete those left figures. That is why I suggested you save beforehand. Then you always have the original file to work on.

```
400 REM ########### READ DIR #########
405 CLS:XDIR:STATUS:T=T+1
415 INPUT"IF WANTED TYPE DISK NUMBER XXX";A$:IFA$=""THEN425
420 INPUT" COPY STATUS";B$:C$=LEFT$(A$,3):GOTO430
425 PRINT"NEXT DISK?Y/N":INPUTY$:IFY$=""THEN405ELSE200
430 P$(T)=C$+"     "+P$(T)+A$+"##"+B$+"K"+"....."
435 NEWDISK:F=0
440 D$=FILE$(F)
445 F=F+1
455 IFD$=""THENGOTO500
465 IFD$="         "THEN440
470 PRINT TYPE$(D$);TAB(6);D$;
475 IFTYPE$(D$)="D"THEN480ELSE PRINTLENGTH(D$):GOTO485
480 PRINT"-":Z$="-----":T=T+1:GOTO490
485    T=T+1:Z=LENGTH$(D$):V$="     "+STR$(Z):Z$=RIGHT$(V$,5):
GOTO490
490 P$(T)=C$+" "+D$+" "+TYPE$(D$)+" "+A$+" "+Z$
495 IFF<120THEN440
500 PRINT"AGAIN :\N"
505 K$=INKEY$:K$=INKEY$
510 IFK$=":"THEN405
515 IFK$="N"THEN200ELSE505

600 CLS:REM######### LPRINT OUTPUT ########
605 'LPRINTCHR$(27);"M";:
610 INPUT"FROM/TO";A,B:INPUT"TAB(N)(0-20-40-62MAX)";N
615 FORJ=ATOB
```

```
 IFP$(J)="^"THEN630ELSE625
625 LPRINTTAB(N)P$(J)
630 NEXT
635 INPUT"AGAIN Y/N";B$:IFB$="N"THEN200ELSE610

650 REM****** MEMORY ***********
655 CLS:POKE30862,212:POKE30863,39
660 PRINTUSR(X);USR(X$)
665 INPUT"MENU-RETURN";X:GOTO200
700 CLS:REM*********** VIEW *********
710 PRINT@0,"SPACE=+1:<.>=-1:<:>=START
715 PRINT@32,"<;>=EDIT 9:A=ADD:E=EDIT 1:M=MENU
720 INPUT"START VIEW LINE NUMBER";X
725 PRINT"PRESS SPACE OR FULLSTOP OR COLON
735 POKE30777,1:PRINTX;TAB(4)P$(X)
740 K$=INKEY$:K$=INKEY$
745 IFK$="A"THENGOSUB815:PRINT"PRESS SPACE"
750 IFK$=" "THENX=X+1:GOTO735
755 IFK$=":"THENCLS:GOTO700
760 IFK$=";"THENH=0:GOSUB1415:CLS:PRINT"PRESS SPACE"
765 IFK$="E"THENGOSUB1010:PRINT"PRESS SPACE"
770 IFK$="."THENX=X-1:IFX<1THENGOSUB 785ELSE735:GOTO735
775 IFK$="M"THEN200
780 GOTO740
785 X=1:RETURN
```

This next section allow you to add comments to any DATA line. Such as DISASS-H T xxx 25643 DISASS shifted to Hi Mem. In VIEW mode have the data you wish to add to on bottom line. Press <(;)> and follow prompts. You can go to the next item or back to VIEW mode.

```
795 ' ****** ADDITION TO DATA ******
800 PRINT:PRINT:PRINT"PRESS SPACE FOR NEXT LINE"
805 PRINT"PRESS COMMA TO RETURN TO VIEW":GOTO830
810 PRINT@384," ";"ADD UP TO 100 CHARACTERS"
815 PRINT:PRINT@417,X;" ";P$(X)
820 INPUTD$
825 P$(X)=P$(X)+" "+D$:GOTO800
830 K$=INKEY$:K$=INKEY$
835 IFK$=" "THENX=X+1:CLS:GOTO815
840 IFK$=","THEN:CLS:RETURN
845 GOTO830

1000 REM ********* EDIT *********
1005 CLS:PRINT:PRINT:INPUT"START AT?";X
1010 CLS:PRINT:PRINT
1015 REM
1020 PRINT"PRESS SPACE FOR NEXT ITEM
1025 PRINT"PRESS << . >>(STOP) FOR PREVIOUS"
1030 PRINT"PRESS << , >> FOR RETURN:PRESS SPACE TO CONTINUE
1035  PRINT@290,"
";
1040 PRINT"                 "
1045  PRINT@290," ";P$(X);"               "
1050 PRINT@256,"";"ENTER TEXT";"  P";" ";X;"          "
1055 INPUT" ";P$(X)
1060 K$=INKEY$:K$=INKEY$
1065 IFK$=" "THENX=X+1:GOTO1035
1070 IFK$="."THENX=X-1:IFX<1THENGOSUB1095ELSE1035:GOTO1035
1075 IFK$=","THENCLS:RETURN
1080 GOTO1060
1095 X=1:RETURN

1100 REM ******* SORTING *********
1105 DEFINT J-M,U-Y
1110 CLS:'POKE30777,1:POKE30779,1:POKE30744,1
1115 RESTORE
1120 FOR G=0 TO 112
1125 READ D
1130 POKE29400+G,D
1135 NEXT
1140 X=0
1145 N=T
1150 J=VARPTR(P$(1))
1155 POKE29200,PEEK(VARPTR(J))
1160 POKE29201,PEEK(VARPTR(J)+1)
1165 POKE 30862,216
1170 POKE 30863,114
1175 X=USR(N)
1180 GOTO200
1185 DATA205,127,10,253,229,229
1187 DATA 193,221,42,16,114
1190 DATA197,221,229,253,225,197,253
1193 DATA 35,253,35,253,35
1195 DATA221,70,00,253,78,00,221,110,01
1197 DATA 221,102,02,253,94,01
1200 DATA253,86,02,26,190,56,11
1203 DATA 32,45,19,13
1205 DATA40,05,35,16,243,24,36,221,70
1208DATA 00,221,110,01,221,102,02
1210 DATA253,78,00,253,94,01,253,86,02
1212 DATA 221,113,00,221,115,01
1215 DATA221,114,02,253,112,00,253,117
1217 DATA 01,253,116,02,193,11,120
1220 DATA177,32,174,193,221,35,221,35
1222 DATA221,35,11,120,177,32,157
1225 DATA253,225,P01:'POP IY FD E1
1230 PRINT:PRINT
1290 REM
1295 REM ******** DELETING ***********
1300 PRINT:PRINT
1305 INPUT"LEFT$( OR RIGHT$(;L/R";H$:IFH$="L"THEN1310ELSE1320
1310 INPUT"START";N:INPUT"END";M:INPUT"CHARS DELETED";L
1315 FORX=NTOM:P$(X)=RIGHT$(P$( ),LEN(P$(X))-L):NEXT:GOTO200
1320 INPUT"START";N:INPUT"END";M:INPUT"CHARS DELETED";L
1325 FORX=NTOM:P$(X)=LEFT$(P$(X),LEN(P$(X))-L):NEXT:GOTO200

1400 REM ***** EDIT GROUPS ********
1405 PRINT@0,"SPACE=NEXT FILE: FULLSTOP=PREVIOUS FILE
1410 PRINT"COMZA FOR RETURN TO VIEW":GOTO1425
1415 CLS:PRINT@128,"";: FORH=XTOX+8:PRINTH;" ";P$(H):NEXT
1420 PRINT@128,"";: FORH=XTOX+8:INPUT"  ";P$(H):NEXT:GOTO1405
1425 K$=INKEY$:K$=INKEY$
1430 IFK$=" "THENX=X+9:GOTO1415
1435 IFK$=","THENCLS:RETURN
1440 IFK$="."THENX=X-9:IFX<1THENGOTO1450ELSE1415:GOTO1415
1445 GOTO1425
1450 X=1:GOTO1415
```

Now we will deal with the SAVE and LOAD routines. Using Ext Bas. we don't need a routine to change a filename. It accepts <<""+G$>> and INPUT commands makes G$ equal the filename y^u type in. First it displays the disk DIR and STATUS, and print LOADING or SAVING, and prints T=xxx . Then asks for name, and from/to. If you are saving the whole file, from 1 to T and press RETURN for both these.C will then be 1 and P will be T. If you want otherwise then put your figures in. As 45/278 etc.

When LOADING if you have only saved the one file from 1 to T, you can just press RETURN as before. If you have <<<banked >>> files then load from 1 to (whatever DIM is.). It will load the file and BREAK showing OUT OF DATA. Just type GOTO 200. Then VIEW and find what the last DATA number is. Then use the <<O>> command and set T to that figure.

If after coming here you change your mind then hit RETURN and you are back in MENU. As it loads or saves it will print a running string of numbers. These are the file numbers being acted on. If you want to stop at any place just use CTRL+BREAK. It will stop and show READY with a flashing CURSOR. Now type <<<GOTO 200 >>>. NEVER repeat NEVER use RUN. If you, do you will loose the file. Why? Because it goes to the CLEAR COMMAND and does as is told. To clear 18000 or whatever.

Lines 10 TO 20 offers a safeguard to doing that accidentally, as it will list line 20. This always applies. If the READY shows then GOTO200. If you want to clear the file for the next one then <<RUN 30>>.

If you have a file too long to handle in one sitting, then you can SAVE it. When you come back to continue you can then save the second part with the same filename, and it will be added onto the first one.

```
45 REM ######## SAVING ############
50 CLS:PRINT:STATUS:XDIR: PRINT@405,"T="T:PRINT@420"SAVING"
55 INPUT"NAME";G$: INPUT"FROM/TO";C,P: IFC=0THENC=1:P=T
60 OPEN""+G$,1:PR#""+G$
65 FOR I=CtoP:PR#""+G$,P$(I): PRINT @440,I:NEXT:CLOSE""+G$:GOTO200

80 REM ####### LOADING ###########
85 CLS:XDIR: PRINT@420,"LOADING": INPUT"NAME";G$:IFG$=""THEN135
90 OPEN""+G$,0: INPUT"FROM/TO";C,P: IFC=0THEN95ELSE100
95 IN#""+G$,P:C=1
100 FORI=CTOP:IN#""+G$,P$(I): PRINT@440,I: NEXT:T=P
105 CLOSE""+G$:GOTO200
```

PRINTER / JOYSTICK CONNECTIONS LOOSE?

Here is an idea to cure that trouble, and one that is very much needed.

It is sent in by Ian Niedzwiecki, who in the past has sent in many articles. Thanks Ian.

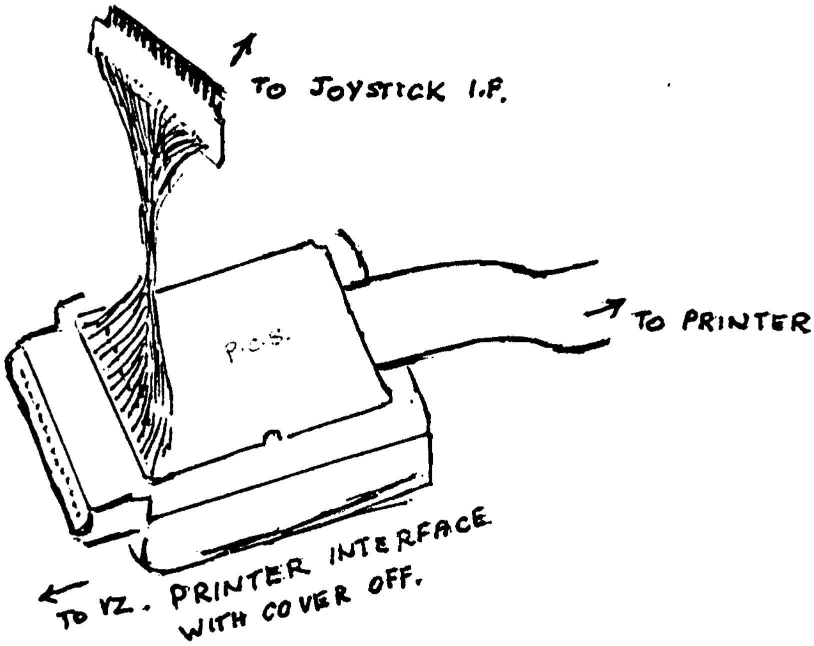
I must point out that it is an IDEA and not a construction article.

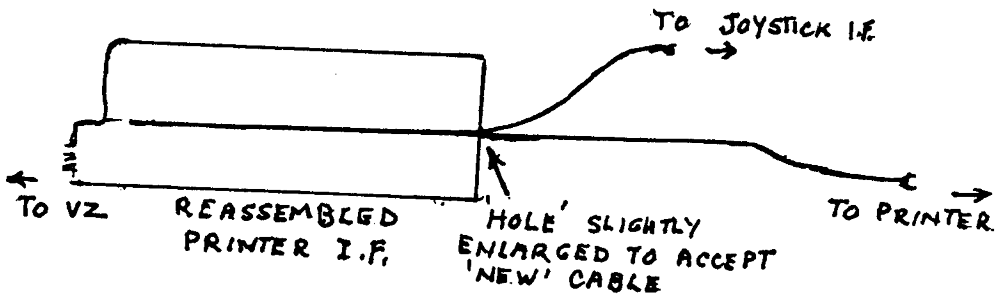
If you are swaping the printer and joysticks often, you soon find you have trouble with the connections being loose.

This idea leaves both the printer and joysticks always connected. No change over. But don't try to use them both at same time.

The only comment I have is, if you disconnect the joysticks, then have some form of cover over the pins to prevent shorts. Perhaps something fashioned out of a cassette case. (ed).

NOT TO SCALE





1. OPEN UP PRINTER INTERFACE UNIT – VZ END.
2. SOLDER A LENGTH OF RIBBON CABLE (ABOUT 9") TO WHERE THE SOCKET PINS|LEGS COME THROUGH THE PCB.
3. ON THE OTHER END OF THE CABLE SOLDER A PIECE OF PCB WITH GOLD FINGERS ON IT. THIS END PLUGS INTO THE JOYSTICK I.F.
4. STRAIGHTEN OUT 'NEW' CABLE AND AFTER SLIGHTLY ENLARGING 'HOLE' IN THE INTERFACE COVER – REASSEMBLE.

```
690 S
7,42)
700 S
2,38)
710 S
7,33)
720 S
1,32)
730 S
6,31)
740 S
4,27)
750 S
9,27)
```

LINES MISSED IN AROUND THE WORLD

```
410 SET(B-4,61):SET(B-4,60):SET(B-4,59):SET(B-4,58):SET(B-4,57)
680 SET(33,40):SET(32,41):SET(31,42):SET(32,42):SET(33,42)
990 A=A+1:SET(A,4):SET(A,5):IFA=65THENGOTO 1010
1420 A=56
1910 A=A+1:B=B-1:SET(A,51):SET(B,51):IFA=51THENGOTO1930
2460 SET(33,33):SET(34,33):SET(31,34):SET(32,34):SET(33,34)
```

```
760 SET(47,27):SET(46,27):SET(45,27):SET(4
4,27):SET(43,27)
770 SET(42,27):SET(45,26):SET(46,25):SET(4
7,24):SET(48,23)
780 SET(49,22):SET(50,21):SET(51,20):SET(5
2,19):SET(51,18)
790 SET(53,18):SET(54,18):SET(55,18):SET(5
6,18):SET(57,18)
800 SET(52,18):SET(58,19):SET(57,20):SET(5
6,21):SET(55,22)
810 SET(54,23):SET(53,24):SET(52,25):SET(5
1,26):SET(50,27)
820 SET(28,29):SET(32,29):SET(36,29):SET(4
0,29):SET(44,29)
830 SET(48,29):SET(52,29):SET(54,29):
831 A$=INKEY$:A$=INKEY$
832 IFA$="A"THENGOTO2910
833 IFA$="V"THENGOTO850
834 IFA$="I"THENGOTO1470
840 IFA$="B"THENGOTO1700
841 IFA$="C"THENGOTO2140
842 IFA$="P"THENGOTO1300
843 IFA$="G"THENGOTO1110
844 IFA$="T"THENGOTO2600
847 IFA$="F"THENGOTO270
848 GOTO831
850 MODE(1)
860 A=0
870 A=A+1:SET(A,63):IFA=127THENGOTO890
880 GOTO870
890 A=63
900 A=A-1:SET(20,A):SET(100,A):IFA=30THENG
OTO 920
910 GOTO900
920 A=20:B=30:C=100:D=30
930 A=A+2:B=B-1:C=C-2:SET(A,B):SET(C,B):IF
A=60THENGOTO 950
940 GOTO 930
950 A=10
960 A=A-1:SET(59,A):SET(60,A):SET(61,A):IF
A=0THENGOTO980
970 GOTO960
980 A=54
990 A=A+1:SET(A,4):SET(A,5):IFA=65THENGOTO
 1010
```

```
1090 FORI=1TO4000:NEXT
1100 GOSUB550
1110 COLOR4:MODE(1):A=-1
1120 A=A+1:SET(45,A):SET(46,A):SET(65,A):S
ET(66,A)
1130 IFA=49THENGOTO1150
1140 GOTO1120
1150 A=46
1170 A=A+1:SET(A,2):SET(A,3):SET(A,13):SET
(A,12)
1180 SET(A,24):SET(A,23):SET(A,39):SET(A,4
0):IFA=65THENGOTO1200
1190 GOTO 1170
1200 A=0:B=63:C=0
1210 C=C+1:A=A+3:B=B-1:SET(A+1,B):SET(A,B)
:IFC=18THENGOTO1220
1215 GOTO 1210
1220 A=109:B=63:C=0
1230 C=C+1:A=A-3:B=B-1:SET(A,B):SET(A-1,B)
:IFC=18THENGOTO1250
1240 GOTO1230
1250 COLOR2:A=45:B=45:C=0
1260 A=A+1:B=B+1:SET(54,A):SET(55,B):IFA=6
3THENGOTO 1280
1270 GOTO 1260
1280 IFUR=5THENSOUND31,1:COPY
1281 FORI=1TO4000:NEXTI
1290 GOSUB 550
1300 MODE(1):COLOR2:A=0
1310 A=A+1:SET(A,63):IFA=127THENGOTO 1330
1320 GOTO 1310
1330 A=-0:B=64
1340 A=A+1:B=B-1:SET(A,B):IFA=63THENGOTO 1
360
1350 GOTO 1340
1360 A=128:B=64
1370 A=A-1:B=B-1:SET(A,B):IFA=64THENGOTO13
90
1380 GOTO 1370
1390 A=63
1400 A=A-1:SET(57,A):SET(70,A):IFA=50THENG
OTO1420
1410 GOTO 1400
1420 A=56
```

TRADING POST

FOR SALE

Word proc. cartridge, DATA CASSETTE RECORDER (DR20)
JOYSTICKS, PRINTER INTERFACE.
Reasonable offer.
John Luxton,
P.O. Box 99. Biggendin. Q'ld. 4621.
Ph. 071-27-1515.

I have the residue of DSE VZ defunct computers for sale. They have various unspecified faults, but are mostly complete. The price is $20 ea. (Ed).

OTHER V Z USER GROUPS

H.V.V.Z.U.G
P.O.Box 161
JESMOND NSW.2299.

DISKMAG
P.O.Box 600.
Taree NSW. 2430.

CENT.VIC.COMP.Club
24 Breen St.
BENDIGO VIC 3550

BRISBANE VZUG
63 Tingalpa St.
WYNUM West. Q'ld. 4178

Graeme Bywater
P.O.Box 388
Morley W.A. 6062

How to write adventure programs.

David has advised that pressure of school work has delayed his articles.

I trust this is only a temporary hold-up, and that we will get them later.

I would ask that those that were asked to give him feeddback will be patient. (Ed).

WANTED WANTED WANTED

A member wishes to use WOULF'S EXBASIC in conjunction with the VZ Sprite generator.
He wants to use the PLOT command, but when he tries the computer resets.
Who will be the first to tell us HOW ? (Ed).

MACHINE LANGUAGE ROUTINES.

BY DON DOWER.

ONE OF THE MOST PRACTICAL APPLICATIONS OF ASSEMBLY-LANGUAGE PROGRAMMING IS TO CARRY OUT SOME OF THE OPERATIONS OF A BASIC PROGRAM.

THE PROCEDURE FOR CALLING A USR SUBROUTINE IS VERY SIMPLE. ALL YOU HAVE TO DO IS TO PUT THE ADDRESS OF THE LOCATION YOU WANT TO CALL INTO LOCATIONS 30862 & 30863.SUPPOSE THAT THE ENTRY ADDRESS IS 7D00(hex).THE FIRST BYTE IS 7D AND THE SECOND 00H.7DH IS 125 AND 00H IS 0. YOU MUST THEREFORE POKE 0 INTO 30862 AND 125 INTO 30863.THEN THE EXECUTION OF A "x=USR(N)" STATEMENT WILL CAUSE A CALL TO LOCATION 7D00H TO BE EXECUTED>
IF YOU WANT THE USR SUBROUTINE TO OPERATE UPON VARIABLES USED BY THE BASIC PROGRAM<YOU NEED TO TELL IT WHERE THOSE VARIABLES ARE LOCATE.THIS IS THE PURPOSE OF THE VARPTR STATEMEMT.VARPTR(X)RETURNS THE ADDRESS OF THE FIRST BYTE OF THE VARIABLE X.INTEGER VARIABLES REQUIRE 2 BYTES,SINGLE PRECISION VARIABLES 4,DOUBLE PRECISION 8,AND STRINGS 3 PLUS THE LENGTH OF THE STRING (0 TO 255 BYTES).PEEK(VARPTR(X))GETS THE ACTUAL VALUE ITSELF,BUT AN ASSEMBLY-LANGUAGE SUBROUTINE WILL USUALLY WANT THE ADDRESS RATHER THAN THE DATA.

THE ONLY PROBLEM WITH PASSING A VARPTR ARGUMENT TO A USR SUBROUTINE COMES WHEN YOU NEED TO PASS MORE THAN ONE OF THEM,SO THAT YOU MUST USE THE "POKE"METHOD MENTIONED ABOVE.IN THIS SITUATION YOU HAV TO BREAK DOWN THE VARPTR ADDRESS INTO TWO BYTES AND POKE THEM INTO THE RESPECTIVE LOCATIONS.HERE WE CAN USE AN EXTRA INTEGER VARIABLE TO SIMPLIFY THE PROCESS.IN THE FOLLOWING EXAMPLE,SUPPOSE THAT YOU WANT TO PASS THE ADDRESS OF THE VARIABLE X TO A USR SUBROUTINE BY POKEING IT INTO LOCATIONS 30862 & 30863.YOU CAN USE AN EXTRA VARIABLE FOR THIS PURPOSE.

10 DEFINT Y 20 Y=VARPTR(X) 30 POKE 30862,PEEK(VARPTR(Y)) 40 POKE 30863,PEEK(VARPTR(Y)+1)
PEEK(VARPTR(Y)) CONTAINS THE FIRST BYTE OF THE ADDRESS OF X,AND PEEK(VARPTR(Y)+1) THE SECOND BYTE.Y MUST BE DEFINED AS A INTEGER,BUT X MAY BE ANY TYPE OF VARIABLE.

IF THE VARIABLE WHOSE ADDRESS YOU WANT TO PASS TO THE ASSEMBLY-LANGUAGE PROGRAM IS SUBSCRIPTED,YOU NEED ONLY PASS THE ADDRESS OF THE FIRST LOCATION USED(USUALLY SUBSCRIPT 0 OR 1).YOU CAN THEN RELY ON THE FACT THAT IF A(0) IS STORED IN ONE SERIES OF BYTES,A(1) WILL BE IN THE NEXT,A(2) WILL FOLLOW A(1),ETC.THE AMOUNT YOU HAVE TO INCREMENT THE ADDRESS DEPENDS UPON THE TYPE OF VARIABLE.FOR INTEGERS,SINGLE AND DOUBLE PRECISION NUMBERS,THIS AMOUNT IS 2,4 AND 8 BYTES RESPECTIVELY.THE DATA ITSELF IS STORED IN THESE CONTIGUOUS LOCATIONS.FOR STRINGS,THE AMOUNT IS 3 BYTES.THE IMFORMATION STORED THERE IS THE LENGTH OF THE STRING IN THE FIRST BYTE,AND THE ADDRESS IN THE FOLLOWING TWO BYTES.THE DATA ITSELF IS STORED ELSEWHERE,IN THE STRING SPACE AREA.

IF YOU WANT TO PICK UP THE ARGUMENT WHEN ENTERING THE ASSEMBLY-LANGUAGE SUBROUTINE,YOU MUST FIRST CALL 0A7FH.TO PASS THE ARGUMENT BACK TO THE BASIC PROGRAM,YOU MUST TERMINATE THE PROGRAM WITH A JUMP TO LOCATION 0A9AH.IF YOU DON'T WANT TO RETURN AN ARGUMENT,YOU SIMPLY RET (RETURN) AT THE END OF YOUR SUBROUTINE.

THE FOLLOWING BASIC PROGRAM BUILDS RANDOM STRINGS FROM 9 TO 21 CHARACTERS & THEN ALPHABETIZES THEM. FOR THIS PROGRAM TO WORK YOU MUST FIRST LOAD ANY EXTENDED BASIC PROGRAM THAT CONTAINS THE "DEFINT","DEFSTR", & VARPTR COMMANDS.

```
01 REM **LOAD XB FIRST**
02 CLEAR 420
03 DEFINT B-Z
04 X=0
05 CLS:POKE30777,1:POKE30779,1:POKE30744,1
06 N=10
07 DIM A$(N)
08 FOR G=0 TO 112
09 READ D
10 POKE29400+G,D
11 NEXT
12 FORI=0TON:A$(I)=""
13 J=RND(12)+9:FORK=1TOJ
14 A$(I)=A$(I)+CHR$(RND(26)+64)
15 NEXT K
16 PRINT I;A$(I)
17 NEXT I
18 P=VARPTR(A$(0))
19 PRINT VARPTR (A$(0))
20 POKE29200,PEEK(VARPTR(P))
21 POKE29201,PEEK(VARPTR(P)+1)
23 POKE 30862,216
24 POKE 30863,114
25 REM 728DH
26 X=USR(N)
27 FOR I=0 TO N:PRINTI;A$(I)
28 NEXT I
29 DATA205,127,10:'CALL 0A7F
30 DATA 253,229 :'PUSH IY
31 DATA229:'PUSH HL
32 DATA193:'POP BC
33 DATA221,42,16,114:'LD IX(7210)
34 DATA197:'PUSH BC
35 DATA221,229:'PUSH IX
36 DATA253,225:'POP IY
37 DATA197:'PUSH BC
38 DATA253,35:'INC IY
39 DATA253,35:'INC IY
40 DATA253,35:'INC IY
41 DATA221,70,00:'LD B(IX+0)
42 DATA253,78,00:'LD C(IY+0)
43 DATA221,110,01:'LD L(IX+1)
44 DATA221,102,02:'LD H(IX+2)
45 DATA253,94,01:'LD E(IY+1)
46 DATA253,86,02:'LD D(IY+2)
47 DATA26:'LD A(DE)
48 DATA190:'CP(HL)
49 DATA56,11:'JR C,0B
50 DATA32,45:'JR NZ,2D
51 DATA19:'INC DE
52 DATA13:'DEC C
53 DATA40,05:'JR Z,05
54 DATA35:'INC HL
55 DATA16,243:'DJ NZ,F3
56 DATA24,36:'JR 24
57 DATA221,70,00:'LD B(IX+0)
58 DATA221,110,01:'LD L(IX+1)
59 DATA221,102,02:'LD H(IX+2)
60 DATA253,78,00:'LD C(IX+2)
61 DATA253,94,01:'LD E(IY+1)
62 DATA253,86,02:'LD D(IY+2)
63 DATA221,113,00:'LD (IX+0),C
64 DATA221,115,01:'LD (IX+1),E
65 DATA221,114,02:'LD (IX+2),D
66 DATA253,112,00:'LD (IY+0),B
67 DATA253,117,01:'LD (IY+1),L
68 DATA253,116,02:'LD (IY+2),H
69 DATA193:'POP BC
70 DATA11:'DEC BC
71 DATA120:'LD A,B
72 DATA177::'OR C
73 DATA32,174:'JR NZ,AE
74 DATA193:'POP BC
75 DATA221,35:'INC IX
76 DATA221,35:'INC IX
77 DATA221,35:'INC IX
78 DATA11:'DEC BC
79 DATA120:'LD A,B
80 DATA177:'OR C
81 DATA32,157:'JR NZ,9D
82 DATA253,225:'POP IY
83 DATA201:'RET
```

Editor's Comment.

This is the sorting routine I refered to in the article on DATABASES. You will find it starting at line 1100.

$$$$$$$$$$ $$$$$$$$$$ $$$$$$$$$$

I have received from Bob Kitch, his list of all the articles that have been published refering to the VZ200-300.

Members may borrow this list, on the same conditions as tapes and back issues.